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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,203	SAINT-HILAIRE ET AL.	
	Examiner	Art Unit	
	DANIEL F. HAJNIK	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8 and 10-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 10-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed computer readable medium (i.e. see claim 30).

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 30-34 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, electro-magnetic signals (where according to the specification the computer readable medium can be a signal, see top of page 4 in [0013]). Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

To expedite a complete examination of the instant application, the claimed rejected under 35 U.S.C. 101 as non-statutory subject matter are further rejected as set forth below in anticipation of applicant amending the claims to place them within the four categories of invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 10-11, 15-21, 24-27, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lok et al. (US Pub 2003/0182469) in view of Merrill et al. (US Patent 6,369,821)

As per claim 1, Lok teaches the claimed:

1. A method comprising: receiving, via a network from another device remote to the device, a motion command *([0027], "The component in the user interface toolkit may be configured to render a graphical item and the remote-capable component may be configured to generate a command to render a graphical item" where the motion is the changing or movement within different user interface elements, i.e. selection of different items in the dropdown menu 216 in figure 6a)*;

wherein the motion command, without including pixel values generated by the another device *([0039], "the baseline interface toolkit 110, but which issue remote messages rather than execute graphical functions ... transmits the commands across the network to the client 104 ... A client viewer ... translates the messages issued ... which are rendered on the client frame buffer 1")*;

directs animation of an image object *([0041], "In rendering the graphical component, the toolkit may include commands to display a plurality of shapes, colors, and text. The toolkit is configured to interact with the application according to an application programming interface. For example, the toolkit receives an invocation, or call, from the application to draw graphical components at certain times during the operation of the application" where drawing graphical components at certain times creates animation effects);*

Presenting the animation of the image object on a display of the device *([0041], "a toolkit has the ability to draw a frequently-used, graphical components on a user display as commanded by an application running on the computer").*

Lok does not teach the remaining claim limitations.

Merrill teaches the claimed:

An index, a plurality of display coordinates and a time value *(col 8, lines 52-54, "The frame data 170 consists of a frame type (image, branch or sound) 172, frame position (x, y coordinates) 174, duration (in 60ths or a second) 176, a unique ID" where a unique ID is an index. In this instance, the unique ID is used to reference a particular animated object and its associated*

frame data. Further, according to fig 5 a given animation file structure can contain multiple frames, i.e. frame 170 where each frame has display coordinates, X and Y. Thus, in animation file structure there are a plurality of display coordinates because there are multiple frames).

An image cache referenced by the index at the plurality of display coordinates over the received time period *(col 9, lines 7-10, "the method used to retrieve image data for the current frame. If the frame type is an image, the sequencer first looks in a data cache of frame bitmaps for an entry equal to the next frame's ID" and col 8, lines 52-54, "The frame data 170 consists of a frame type (image, branch or sound) 172, frame position (x, y coordinates) 174, duration (in 60ths or a second) 176, a unique ID" where a duration is a received time period).*

updating a frame buffer of the device with the image object of the image cache over the time period to animate the image object per the motion command *(col 9, lines 7-10, "the method used to retrieve image data for the current frame. If the frame type is an image, the sequencer first looks in a data cache of frame bitmaps for an entry equal to the next frame's ID" and in figure 6. The updating is done over time according to the duration of the frame, see figure 5, piece 176)*;

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Lok with Merrill in order to expand the range of graphical capabilities in the user interface and make the output more interesting. Lok can be modified by Merrill by incorporating the unique frame ID tags, coordinate tags, duration tags, and image cache of Merrill and putting it into the interface toolkit of Merrill. Through this combination, the animating elements and their

associated tags in Merrill can be built into the graphical user interfaces used by Lok on the client system as shown in figure 7.

As per claim 2, Lok teaches the claimed:

2. The method of claim 1 further comprising generating a video output signal representative of the frame buffer and the motion of the image object *([0041], "a toolkit has the ability to draw a frequently-used, graphical components on a user display as commanded by an application running on the computer" where the displaying requires an output signal).*

As per claim 3, Lok does not teach the claimed limitations.

Merrill teaches the claimed:

3. The method of claim 1 further comprising

receiving a background image from the another device *(col 5, lines 42-46, "During playback of the animation, the server relies on graphic support software in the underlying operating system 120 to create windows, post messages for windows, and paint windows and col 4, lines 66-67, "the color of corresponding pixels in the background bitmap". Thus, for animation playback the background image data is transferred from the server to the client and displayed on the client),* storing the background image to a background buffer *(col 9, lines 30-32, "The loader constructs a composite bitmap by performing bit block transfers from the decompressed bitmaps to an off-screen buffer" where part of the off-screen buffer is a background buffer where background pixels are stored. This is because the animation is drawn overtop the background, thus in order*

to form a composite bitmap, some background data is used and maybe loaded from an offscreen buffer), and

updating the frame buffer with the background image prior to updating the frame buffer with the image object *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

It would have been obvious to one of ordinary skill in the art at the time of invention to generate the background images as taught by Merrill with the teachings of Lok in order to enhance the graphical user interface with more interesting features and design through the use of background images on the screen.

As per claim 4, the reasons and rationale for the rejection of claim 3 is incorporated herein. Lok does not teach the claimed limitations.

Merrill teaches the claimed:

decompressing the background image *(col 4, lines 66-67, "the color of the corresponding pixels in the background bitmap" and col 13, lines 23-24, "If the image bits are in a compressed format they are decompressed")* and

storing in a decompressed form *(col 13, lines 31-33, "The animation is played by first rendering the uncompressed frame image data for the next frame to an offscreen video memory buffer").*

It would have been obvious to one of ordinary skill in the art at the time of invention to use the background decompression techniques as taught by Merrill with the teachings of Lok. The motivation of claim 3 is incorporated herein.

As per claim 5, Lok teaches the claimed:

5. The method of claim 1 further comprising

receiving the image object from the another device *([0046], "receiving commands to draw graphical items")*, and

storing the image object in the image cache *([0039], "remote-baseline interface toolkit 110, which are rendered on the client frame buffer 116" where image object is stored as a rendered object)*.

As per claim 6, this claim is similar in scope to claims 4 and 5, and thus is rejected under the same rationale.

As per claim 10, Lok does not teach the claimed limitations.

Merrill teaches the claimed:

10. The method of claim 1 wherein

the motion command indicates a first scale and a second scale, *(col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface", col 15, line 31, "to scale an animation", 15, lines 33-34, "when the scale of an animation changes" where it is required for a changing animation during scaling to have a beginning scale (first scale) and ending scale (second scale), and col 14, lines 4-6, "After the frame image is rendered to the display device, an operating system timer is set to go off in the amount of time specified by the frame's duration")*,

updating the frame buffer with the image object comprises updating the frame buffer to animate the image object transitioning from the first scale to the second scale over the time period *(col*

11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").

It would have been obvious to one of ordinary skill in the art at the time of invention to generate the image scaling as taught by Merrill with the teachings of Lok in order to provide a wider array and more flexibility to the image manipulation techniques available to the user for making interesting user interfaces.

As per claim 11, the reasons and rationale for the rejection of claim 10 is incorporated herein.

As per claim 15, Lok does not teach the claimed limitations.

Merrill teaches the claimed:

15. The method of claim 1 further comprising receiving a cache management command from the another device, and updating the image cache per the cache management command *(col 14, lines 57-63, "However, after the region is used it is save to the region cache on disk. The next time the region is required it can simply be read from the cache instead of being generated in real-time. Thus, the system gets the benefit of the pre-computed region without it having to have been downloaded" where saving the region to cache is updating the image cache and this saving to the cache is a cache management command).*

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the cache management as taught by Merrill with the teachings of Lok in order to provide a better and more efficient cache by actively managing it through management commands.

As per claim 16, Lok does not teach the claimed limitations.

Merrill teaches the claimed:

16. The method of claim 1 further comprising providing the another device with an indication that the device has completed the motion command *(col 22, lines 66-67, "Stop—Clients invoke this method to halt the current animation and play the next queued animation" and col 32, lines 37-39, "The server monitors for these client-specific commands as well as global commands and sends a notification to the appropriate client when it detects the input command" where this notification is an indication).*

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize indication message as taught by Merrill with the teachings of Lok in order to provide better feedback to the another remote device and better communication.

As per claim 17, the reasons and rationale for the rejection of claim 1 is incorporated herein.

Lok teaches the claimed:

17. An apparatus *(in figure 3, piece 102, "server")* comprising

at least one processor to execute instructions *([0054], "The application logic 106 is executed entirely in the server 102" where executing requires a processor),*

a network interface controller to transmit commands to a remote device *(in the abstract, "A network communication protocol of sending messages between the remote-capable user interface toolkit on the server and the user interface toolkit on the client" where a network interface controller is required to make the network communication protocol work properly),*

a memory comprising a plurality of instructions that in response to being executed by the at least one processor *([0054], "The application logic 106 is executed entirely in the server 102" where the application logic has instructions associated with the logic)*, result in the at least one processor,

loading the remote device with image objects *([0027], "Similarly, the server may be configured to communicate the message to the user interface toolkit on the remote client to render a graphical item" where graphical items can have image objects associated with them)*, and

As per claim 18, Lok teaches the claimed:

18. The apparatus of claim 17 wherein the plurality of instructions further result in the at least one processor generating the one or more motion commands based upon one or more events generated by an application of the apparatus *([0044], "When the user clicks the button, the toolkit generates an event. In this case, the result may be that a toolkit text window is automatically closed when the event listener detects an event triggered by the button component" where closing the toolkit text window is a command)*.

As per claim 19, Lok teaches the claimed:

19. The apparatus of claim 17 wherein the plurality of instructions further result in the at least one processor generating the one or more motion commands based upon one or more events received from the remote device via the network interface controller *([0046], "These events are then conveyed to the application according to the application programming interface, which*

enables the application to take some action based on the events generated by the user" where events is communicated across the network between client 104 and server 102 in figure 3).

As per claim 20, Lok does not teach the claimed limitations.

Merrill teaches the claimed:

the motion command indicates first location, second location, and the time period *(col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface", col 10, line 66, "The first step is to position the region window at the appropriate location as specified by the frame's x, y coordinate in the frame data block" (first position) and col 22, "Move to—This method moves the animation to a specified location in screen coordinates" (second location) and col 14, lines 4-6, "After the frame image is rendered to the display device, an operating system timer is set to go off in the amount of time specified by the frame's duration" (a time period)).*

updating the frame buffer with the image object comprises updating the frame buffer to animate the image object moving from the first location to the second location over the time *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

It would have been obvious to one of ordinary skill in the art at the time of invention to use the motion commands and updating as taught by Merrill with the teachings of Lok in order to better organize the motion command data structures through the use of explicit coordinate locations and time periods.

As per claims 21, 24, 25, 26, and 27, these claims are similar in scope to claims 10, 1, 2, 20, and 10, respectively, and thus are rejected under the same rationale.

As per claim 30, the reasons and rationale for the rejection of claims 1 and 17 are incorporated herein. Lok teaches the claimed:

30. A computer-readable storage medium comprising a plurality of instructions that in response to being executed, result in an apparatus, determining to update a graphical user interface in response to one or more events *([0053], "the application logic 106 which resides on the server 102 interacts with the remote client 104 by making calls on the RJFC components on the server 102 alone" where application logic to reside on the server requires a storage medium and [0054], "The application logic 106 is configured by the programmer to interact with the user interface toolkit according to an application programming interface" where the user interface is a graphical user interface)*,

As per claims 31 and 32 these claims are similar in scope to claims 20 and 10, respectively, and thus are rejected under the same rationale.

3. Claims 8, 12, 13, 22, 23, 28, 29, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lok in view of Merrill in further view of Stern (US Patent 4,600,919).

As per claim 8, the reasons and rationale for the rejection of claim 20 is incorporated herein. Lok does not explicitly teach the remaining claim limitations.

Stern teaches the claimed:

Image object moving along a curve defined by the plurality of coordinates over the time period *(in figure 10 where the image moves along a curve).*

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Lok, Merrill, and Stern. Lok and Merrill can be modified by Stern by incorporating the curve object movements into the animation system used in figures 5 and 6 of Merrill. The combination can be achieved by matching to curve movement coordinates of Stern with the coordinates saved in piece 174 in animation file structure of figure 5 of Merrill. Stern teaches one advantage of the combination, by teaching of generating realistic motion with minimal labor (an automated process using interpolation between key frames) (col 2, lines 7-13).

As per claim 12, Lok teaches the claimed:

updating the frame buffer with the image object comprises updating the frame buffer *([0041], "In rendering the graphical component, the toolkit may include commands to display a plurality of shapes, colors, and text ... the toolkit receives an invocation, or call, from the application to draw graphical components at certain times during the operation of the application" where drawing graphics at certain times is updating).*

Lok does not explicitly teach the remaining claim limitation.

Stern teaches the claimed:

the motion command indicates a first rotation, a second rotation and

the image is rotated from the first rotation to the second rotation over the time period *(col 10, lines 33-36, "Each of the motion, rotation, and scaling parameters of the transformation matrices of the current joint are interpolated in the present invention, and this is done for each of*

the x, y, and z components" where this interpolation can occur between a starting rotation (first rotation) and an ending rotation (second rotation) over a period of time, i.e. over the frames shown in figure 10).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the first and second rotations as taught by Stern with the teachings of Lok. The motivation of claim 8 is incorporated herein.

As per claims 13, 22, 23, 28, 29, 33, and 34, these claims are similar in scope to claims 12, 12, 8, 12, 8, 12, and 8, respectively, and thus are rejected under the same rationale.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lok in view of Merrill in further view of Richardson (NPL Document, "The RFB Protocol").

As per claim 14, Lok does not explicitly teach the remaining claim limitations.
Richardson teaches the claimed:
14. The method of claim 1 further comprising receiving a capabilities command from the another device, and providing the another device with capabilities of the device *(page 7, section 5.1.1, first paragraph, "Handshaking beings by the server sending the client a ProtocolVersion message. This lets the client know which is the latest RFB protocol version number supported by the server" where this version number is part of the capabilities of the client).*

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Lok, Merrill, and Richardson. Lok and Merrill can be modified by Richardson by

incorporating the capabilities checking technique of Richardson into the network communicate protocol used by Lok in [0057]. One advantage of the combination is to increase the reliability of the system by ensuring adequate capabilities during interaction.

Response to Arguments

Applicant's arguments filed 12/19/2007 have been fully considered but they are not persuasive. Applicant argues Merrill does not teach the claimed index, a plurality of display coordinates and a time value, and does not teach the claimed an image cache referenced by the index at the plurality of display coordinates over the received time period (page 12-13 in filed response). The examiner respectfully maintains that the rejections are proper because Merrill does teach these features. For example, Merrill teaches the following: *(col 8, lines 52-54, "The frame data 170 consists of a frame type (image, branch or sound) 172, frame position (x, y coordinates) 174, duration (in 60ths or a second) 176, a unique ID").* In this instance, the unique ID acts as an index. The unique ID is used to reference a particular animated object and its associated frame data. Further, according to fig 5 a given animation file structure can contain multiple frames, i.e. frame 170 where each frame has display coordinates, X and Y. Thus, in animation file structure there are a plurality of display coordinates because there are multiple frames. Merrill also teaches the following: *(col 9, lines 7-10, "the method used to retrieve image data for the current frame. If the frame type is an image, the sequencer first looks in a data cache of frame bitmaps for an entry equal to the next frame's ID").* In this instance, the frame ID or index is referenced in the cache used by the system.

Applicant's remaining arguments have also been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel F. Hajnik whose telephone number is (571) 272-7642. The examiner can normally be reached on Mon-Fri (8:30A-5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka J. Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DFH

/Ulka Chauhan/
Supervisory Patent Examiner, Art Unit 2628